Expected Results

- The Red Line Selective Systems Replacement Project will provide the following benefits:

  - A cost effective way to increase the reliability of the vehicle
  - Upgrades to the HVAC system and rework to the vehicle interior will improve passenger comfort.
  - Exterior work will improve the appearance of the vehicle.
  - Improved vehicle reliability will reduce maintenance costs and increase the number of vehicles available for revenue service.
  - Elimination of obsolete components will allow for more effective repairs to the vehicles for their intended life.

MBTA RED LINE #2 CAR

SELECTIVE SYSTEMS REPLACEMENT PROJECT

OCTOBER 20, 2010

BACKGROUND

- A total of fifty-eight (58) Red Line #2 cars were manufactured by UTDC and delivered to the MBTA in 1987 and 1988.
- To ensure that these vehicles are available for their intended life a Selective Systems Replacement Program is being performed, with the goal of:
  - Providing increased service reliability.
  - Eliminating system obsolescence.
  - Improving passenger and operator amenities.

PLANNING PHASE

- MBTA Operations initiated the project in March, 2008.
- Engineering evaluations were conducted on the vehicle's structure, systems and components to determine the scope of work (SOW).
- Based upon the evaluations, a SOW was created to meet the project budget of $46M.
- The SOW for the project includes but is not limited to: HVAC, Propulsion, Low Voltage Power Supply, Doors, Couplers, Air System, Operators Cab and Passenger Amenities.
- Based on the defined SOW, procurement activities commenced to secure required materials.
- Project tracking software has been created to assist in management of the project, tracking of material and the configuration of the vehicles.

PRODUCTION PHASE

- A total of six (6) production stations have been created at the Cabot Repair Facility to complete the project:
  - Station 1 – Undercarriage Clean and Vehicle Preparation
  - Station 2 – Undercarriage and Interior Work
  - Station 3 – Truck Installation and Leveling
  - Station 3a – Truck shop and Subassembly Area
  - Station 4 – Paint
  - Station 5 – Final Test
- Material procured for the project is being stored and kitted at the Watertown and Charlestown facilities.
- Material is being delivered to Cabot on an as needed basis to minimize storage constraints at the Cabot repair facility.
- Prototype installations and first production installations occurred on cars 1712 and 1713 beginning in June, 2010.
- The production phase of the project began on August 15, 2010 (cars 1706 & 1707).
- MBTA Operations will support the project utilizing the following resources:
  - Full time project labor: one Maintenance Supervisor; two Forepersons; twenty-two (22) repairers; two Car Cleaners and one Stock Person.
  - Part-time project labor: one Paint Foreperson; seven Painters; one Sheet Metal Worker and one Carpenter.
  - Subway Main Repair is providing labor support to the program on an as needed basis: Foreperson's, Laborers, Electricians, Engineers and Machinists.
- Anticipated time to complete one married pair (two cars) is forty-three (43) days.
- Three married pairs (six cars) will be in the production line for the duration of the project.
- Anticipated time frame to complete the project is 21 months by **April, 2012.**